

CLAIMS

1. A fixing apparatus comprising:

a rotating heating element that heat-fixes an unfixed image on a recording medium;

5 a heating section that heats the rotating heating element;

a power supply that supplies power to the heating section; and

10 a self-diagnosis section that issues a directive for heating when a condition for not heating the rotating heating element has been met, and confirms that the rotating heating element is not heated.

2. The fixing apparatus according to claim 1, wherein

15 the power supply has:

an inverter circuit that supplies a high-frequency alternating current to the heating section; and

an oscillation stop circuit that stops oscillation of the inverter circuit when the rotating heating element 20 stops or has a rotation speed less than or equal to a threshold value.

3. The fixing apparatus according to claim 2, further comprising:

25 a signal generation section that outputs a phase signal corresponding to a rotation speed of the rotating heating element; and

a rotation detection section that is provided independently of a processor, and detects from the phase signal that the rotating heating element has stopped rotating or has a rotation speed less than or equal to 5 a threshold value.

4. The fixing apparatus according to claim 1, wherein the power supply has:

an inverter circuit that supplies a high-frequency alternating current to the heating section; and
10 a power-supply-side processor that controls oscillation of the inverter circuit in accordance with a control signal supplied from a processor, and when the rotating heating element stops or has a rotation speed 15 less than or equal to a threshold value, stops oscillation of the inverter circuit without regard to the control signal.

5. The fixing apparatus according to claim 4, further comprising a signal generation section that outputs a phase signal corresponding to a rotation speed of the rotating heating element;

wherein the power-supply-side processor detects from the phase signal that the rotating heating element 25 has stopped rotating or has a rotation speed less than or equal to a threshold value.

6. The fixing apparatus according to claim 1, wherein
the self-diagnosis section executes self-diagnosis each
time power is turned on and/or restoration is performed
from a sleep state, and/or at regular intervals during
5 standby.

7. The fixing apparatus according to claim 1, wherein
the power supply has:

an inverter circuit that supplies a high-frequency
10 alternating current to the heating section; and
a power suppression circuit that controls
oscillation of the inverter circuit in accordance with
a power control signal supplied from a processor, and
when the rotating heating element stops or has a rotation
15 speed less than or equal to a threshold value, suppresses
oscillation of the inverter circuit without regard to
the power control signal.

8. An image forming apparatus comprising:

20 an image forming section that forms an unfixed image
on a recording medium; and
a fixing apparatus that heat-fixes by means of a
rotating heating element an unfixed image formed on the
recording medium by the image forming section;
25 wherein the fixing apparatus according to claim 1
is used as the fixing apparatus.